

and description are to be regarded as illustrative in nature, and not in a restrictive or limiting sense, with the scope of the application being indicated in the claims.

BRIEF DESCRIPTION OF THE FIGURES

For a fuller understanding of the nature and objects of the present invention, reference should be made to the following detailed description taken in connection with the accompanying drawings in which the same reference numerals are used to indicate the same or similar parts wherein:

Figure 1 shows a cross sectional view of a portion of a prior art FED;

Figure 2 shows a flow chart of a method according to the invention for forming spacers in an FED;

Figures 3A, 3B, 3C, 3D, and 3F show cross sectional views of structures formed at various steps in the method shown in Figure 2;

Figure 3E shows a top view of one of the columns shown in Figure 3D;

Figure 3G shows a top view of one of the columns shown in Figure 3F;

Figure 4 shows a flow chart of alternate embodiments according to the invention of the method shown in Figure 2; and

Figure 5 shows a flow chart of another method according to the invention for forming spacers in an FED.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Figure 2 shows a flow chart of a method 200 according to the invention for constructing improved spacers for use in FEDs. Figures 3A-3G illustrate examples of the structures formed according to the invention at various steps of the method 200. Step 210 is the first step in method 200 and Figure 3A shows the structure 300 formed after completion of step 210. The structure 300 includes a substrate 310 and a layer of photoresist 312 that is formed over the substrate 310. The layer of photoresist 312 preferably comprises a layer of SU-8 type photoresist. As will become clearer from the description below, the photoresist 312 is used to form spacers in a FED. Although the substrate 310 could comprise any surface, the substrate 310 typically comprises the baseplate of an FED (e.g., such as baseplate 102 as shown in Figure 1). Further, the upper portion of the substrate 310 that contacts the